Samuel Felton

Personal Information

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Programming Experience

Python	**Ruby & Ruby on Rails**
3 Years	*3 Years*
JavaScript	**VBScript & ASP**
4 Years	*3 Years*
Java	**Typescript, React.js, NextJS**
1 Year	*<1 Year*

Education

University of Sheffield – MCOMP Computer Science, 2.1

September 2019 - June 2023

Event Management System

Implemented an accessible Ruby on Rails + Postgres event management site with a team of students.

- Lead the team to construct mockups for brand and site design with Figma.
- 85% Test coverage with RSpec Unit Tests.
- 96.4% average usability with Lighthouse overview.

Dissertation: Identifying Potentially Idiomatic Expressions

Implemented a state-of-the-art transformer based large language model with Tensorflow and Python.

Compared and evaluated each model's ability to represent idiomatic language.

Police Case Management Web App

Built a dummy police case collaboration web app with a team of developers.

Mocked and Implemented a progressive web app with the MERN stack.

Modelling disease spread in rabbit populations

Developed an agent based model using python to simulate rabbit culling during a myxomatosis outbreak.

Wrote a report on our findings with a group of researchers.

Work Experience

University of Sheffield - PGR Progression Monitoring System Developer

July 2021 - March 2023

Post Graduate Report System

Prototyped and deployed a comprehensive form distribution website to track PhD students in the Engineering Faculty with Ruby on Rails and Postgres.

- Identified high impact needs in weekly client meetings
- Lead the design team to build wire-frames with Moqups.
- Grew the app from a site in one department into a faculty wide system.

SystemServe - Part-Time Web Developer

July 2019 - Present

Automated Webpage Builder (XDT)

Built a custom web page builder to automate writing the full stack necessary to present client data in tables and lists.

- Refactored a legacy system, ensuring 100% backwards compatibility.
- Obeyed strict coding standards to maintain scalability and flexibility.

Google Maps Webpage

Designed and developed a map display widget for websites using the Google Maps API Platform and Javascript.

- Wrote an algorithm to make densely clustered map markers more legible.
- Optimised runtime of map marker algorithm 100-fold. Automated Webpage Builder (XDT)

Diocese of Winchester Inventory Database

Translated a large inventory dataset from a flat-file database into a custom **SQL Server relational database.**

Developed an import routine with **VBScript** and **SQL queries** to transfer five years of data into the new database.

Global Engineering Challenge

Presented a public health app to a panel of experts with a group of engineers.

Received the "Best Communicated Solution" award.

Colchester Sixth Form College

September 2017 - June 2019

- A-Level Computer Science: A
- A-Level Electronics: A*
- A-Level Mathematics: A

Philip Morant School and College

September 2012 - June 2017

12 GCSEs from A*-C including Grade 8 in Mathematics and Grade 7 in English Language.

Extracurricular Activities

Secretary of the Computer Science Society

2022-23

Elected to organise meetings and events for the UoS Computer Science Society.

ShefJam 9

February 2023

Lead a subcommittee to host a 3 day game jam.

Liaised with sponsors to organise prizes for attendees.

National Citizenship Service

2017

Worked with a group of young adults to help renovate a local scout hut and rebuild their campfire facilities.

Rockscool Grade 6: Electric Guitar

2017

Trinity College London Grade 5: Drum Kit

2015

Diocese of Salisbury Automated Application System

Designed and built HTML forms for the application, vetting, and approval of new school governors, for the diocese of Salisbury.

University of Sheffield - Student Demonstrator

September 2021 - December 2021

Assisted 2nd year computer science students in their **Haskell** programming assignment.

Provided insight and **experience** with the **Haskell** programming language to help students find solutions for their projects.

Colchester Sixth Form College - Part-time Electronics Technician

October 2018 - June 2019

Repaired broken PC-microchip interface devices.

Taught electronics students how to use department's facilities.

Stock Management for student's end of year projects.

Personal Projects

Full stack Typescript app (Speakout)

2023

Built a twitter clone using Typescript with NextJS, React.js, Tailwind, Prisma and Postgres.

Deployed the project as a serverless app to Vercel.

React playground

2023

Independently completed an online react course.

- Deployed Docker projects built with React to a home server
- Protected against cyber attacks with NGINX reverse proxy.

Wordle Solver

2021

Wrote a **python** script to solve daily Wordle puzzles.

Arduino

2019

Designed and built an arcade machine using **Arduino.**

Personal Qualities

- Weekly Badminton player.
- Can solve a Rubik's Cube in a minute and a half.
- Played bass, drums and guitar for over 6 years.